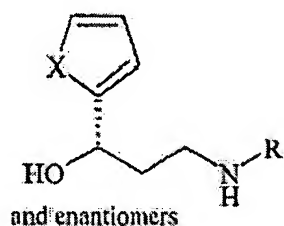


Amendments To The Claims

This Listing Of Claims will replace all prior versions, and listings, of the claims in the application.

Listing of the Claims:

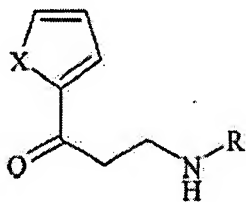
Claim 1 (Presently Presented): A process for the preparation of a chiral compound of formula:



I

wherein X represents S or O, and R represents C₁₋₆-alkyl, C₃₋₈-cycloalkyl, aryl or aralkyl, each aryl or aralkyl being optionally further substituted with one or more C₁₋₄-alkyl groups and/or halogen atoms,

which process comprises the asymmetric hydrogenation of a compound of formula:

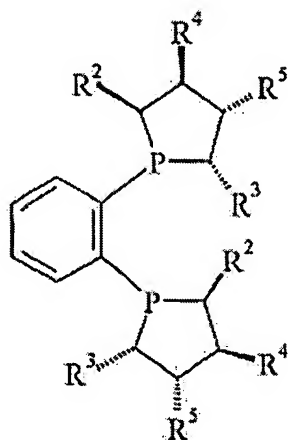


II,

wherein X and R are as defined above,

in the presence of a transition metal complex of a chiral bidentate phosphine ligand and, optionally, a base.

Claim 2 (Previously Presented): The process of claim 1 wherein the chiral bidentate phosphine ligand is a compound of formula:

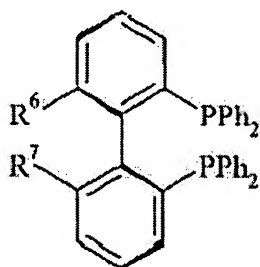


III,

and enantiomers

wherein R^2 and R^3 are methyl, ethyl or isopropyl, and wherein R^4 and R^5 are hydrogen or R^4 and R^5 together form an isopropylidenedioxy group.

Claim 3 (Previously Presented): The process of claim 1, wherein the chiral bidentate phosphine ligand is a compound of formula:



IV,

and enantiomers

wherein R^6 and R^7 are methoxy or ethoxy or wherein R^6 and R^7 together form a 1,3-propylidenedioxy or a 1,4-butylidenedioxy group.

Claim 4 (Original): The process of claim 1, wherein the chiral bidentate phosphine ligand is selected from the group consisting of (S,S)-Me-DuPhos, (S,S)-Et-DuPhos, (S,S,S,S)-Me-KetalPhos and (S)-C4-TunaPhos.

Claim 5 (Previously Presented): The process of claim 4, wherein the transition metal is Ru or Rh.

Claim 6 (Previously Presented): The process of claim 5, wherein the transition metal complex of the chiral bidentate phosphine ligand comprises at least one fiene, alkene or arene as stabilizing ligand.

Claim 7 (Previously Presented): The process of claim 6, wherein the transition metal complex of the chiral bidentate phosphine ligand comprises at least one stabilizing ligand selected from the group consisting of 1,5-cyclooctadiene and p-cymene.

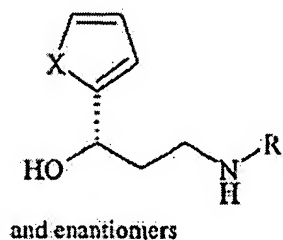
Claim 8 (Previously Presented): The process of claim 7, wherein the counterion of the transition metal complex of the chiral bidentate phosphine ligand is selected from the group consisting of $C1^-$, BF_4^- , AsF_6^- , SbF_6^- and triflate.

Claim 9 (Previously Presented): The process of claim 8, wherein the catalyst is prepared by mixing a transition metal complex of the formula $[Rh(cod)_2]^+BF_4^-$ with a chiral bidentate phosphine selected from the group consisting of (S,S)-Me-DuPhos, (S,S)-Et-DuPhos and (S,S,S,S)-Me-KetalPhos.

Claim 10 (Previously Presented): The process of claim 9, wherein the base is a hydroxide, a methanolate or an ethanolate of lithium, sodium or potassium or a mixture of said bases.

Claim 11 (Previously Presented): The process of claim 10, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 bar.

Claim 12 (Withdrawn): A compound of formula:



or an addition salt of a proton acid, of said compound of formula 1, wherein X represents S or O, and R represent C₁₋₆-alkyl, C₃₋₈-cycloalkyl or benzyl with the exception of compounds wherein X is S and R is methyl.

Claim 13 (Previously Presented): The process of claim 1, wherein the transition metal is Ru or Rh.

Claim 14 (Previously Presented): The process of claim 1, wherein the transition metal complex of the chiral bidentate phosphine ligand comprises at least one fiene, alkene or arene as stabilizing ligand.

Claim 15 (Previously Presented): The process of claim 14, wherein the transition metal complex of the chiral bidentate phosphine ligand comprises at least one stabilizing ligand selected from the group consisting of 1,5-cyclooctadiene and p-cymene.

Claim 16 (Previously Presented): The process of claim 1, wherein the counterion of the transition metal complex of the chiral bidentate phosphine ligand is selected from the group consisting of C1⁻, BF₄⁻, AsF₆⁻, SbF₆⁻ and triflate.

Claim 17 (Previously Presented): The process of claim 1, wherein the catalyst is prepared by mixing a transition metal complex of the formula $[\text{Rh}(\text{cod})_2]^+\text{BF}_4^-$ with a chiral bidentate phosphine selected from the group consisting of (S,S)-Me-DuPhos, (S,S)-Et-DuPhos and (S,S,S,S)-Me-KetalPhos.

Claim 18 (Previously Presented): The process of claim 1, wherein the base is a hydroxide, a methanolate or an ethanolate of lithium, sodium or potassium or a mixture of said bases.

Claim 19 (Previously Presented): The process of claim 11, wherein the hydrogen pressure during the reaction is in the range of 10 to 30 bar.

Claim 20 (Previously Presented): The process of claim 1, wherein the hydrogen pressure during the reaction is in the range of 1 to 60 bar.

Claim 21 (Previously Presented): The process of claim 20, wherein the hydrogen pressure during the reaction is in the range of 10 to 30 bar.

Claim 22 (New): The process of claim 1, wherein X in the compound of formula II and the chiral compound of formula I is S.